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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/785,514	02/16/2001	Jian-Bing Fan	A-68970-1/DJB/RMS/DCF	5362

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EXAMINER
CHAKRABARTI, ARUN K

ART UNIT	PAPER NUMBER
1634	

DATE MAILED: 03/28/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.	Applicant(s)
09/785,514	Fan
Examiner	**Art Unit**
Arun Chakrabarti	1634

-- *The MAILING DATE of this communication appears on the cover sheet with the correspondence address* --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on *Feb 14, 2003* .

2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) *14-34* is/are pending in the application.

4a) Of the above, claim(s) _____ is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) *14-34* is/are rejected.

7) ☐ Claim(s) _____ is/are objected to.

8) ☐ Claims _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.

10) ☐ The drawing(s) filed on _____ is/are a) ☐ accepted or b) ☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13) ☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a) ☐ All b) ☐ Some* c) ☐ None of:

1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____ .
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

*See the attached detailed Office action for a list of the certified copies not received.

14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

a) ☐ The translation of the foreign language provisional application has been received.

15) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s). _____
4) ☐ Interview Summary (PTO-413) Paper No(s). _____
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☒ Other: *Detailed Action*

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on February 14, 2003 has been entered.

Specification

2. New claims 30-34 have been added.

Double Patenting

3. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970);and, *In re Thorington,* 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321© may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

4. Claims 14-34 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-30 of U.S. Patent No. 6,355,431 B1 in view of Chee et al. (U.S. Patent 6,429,027 B1) (August 6, 2002). Claims 1-30 of U.S. Patent No. 6,355,431 B1 clearly teach the instant claimed method of genotyping comprising:

a) providing an array composition comprising:

I) a substrate with a surface comprising discrete sites; and

ii) a population of microspheres comprising at least a first and a second subpopulation,

wherein the microspheres are randomly distributed on the surface;

b) contacting the array composition with a first set of extension probes that hybridize with at least the first target sequence adjacent to a first detection position to form an extension complex;

c) contacting the extension complex with a composition comprising:

I) at least a first nucleotide;

ii) polymerase;

wherein the polymerase extends a first extension probe with the first nucleotide when the first nucleotide is complementary to the first detection position of the first target sequence; and

d) detecting the presence of a first nucleotide and also a method further comprising adding a ligase to form a ligation complex (Claim 6).

Claims 1-30 of U.S. Patent No. 6,355,431 B1 does not teach the method wherein the microspheres of each subpopulation each comprise a plurality of target analytes attached to the microspheres with first and second attachment moieties.

Chee et al teach the method wherein the microspheres of each subpopulation each comprise a plurality of target analytes attached to the microspheres with first and second attachment moieties (Claims 1-7 and Column 22, line 5 to Column 23, line 23).

Claims 1-30 of U.S. Patent No. 6,355,431 B1 does not teach the method wherein the substrate is a fiber optic bundle.

Chee et al teach the method wherein the substrate is a fiber optic bundle (Column 22, lines 5-47).

Claims 1-30 of U.S. Patent No. 6,355,431 B1 does not teach the method wherein the substrate is selected from the group consisting of glass and plastic.

Chee et al teach the method wherein the substrate is selected from the group consisting of glass and plastic (Column 7, lines 2-25).

Claims 1-30 of U.S. Patent No. 6,355,431 B1 does not teach the method further comprising contacting the microspheres with decoder binding agent, wherein the microspheres of each subpopulation comprises an identifier binding ligand that will bind a decoder binding ligand for identification and elucidation of the target analyte.

Chee et al teach the method further comprising contacting the microspheres with decoder binding agent, wherein the microspheres of each subpopulation comprises an identifier binding ligand that will bind a decoder binding ligand for identification and elucidation of the target analyte (Column 15, line 51 to Column 21, line 2).

Claims 1-30 of U.S. Patent No. 6,355,431 B1 does not teach the method wherein the target analytes comprise target sequences of nucleic acids comprising target genomic DNA.

Chee et al teach the method wherein the target analytes comprise target sequences of nucleic acids comprising target genomic DNA (Column 22, lines 48-65, and Column 23, line 50 to Column 24, line 49).

It would have been *prima facie* obvious to one having ordinary skill in the art at the time the invention was made to combine and substitute the method further comprising contacting the microspheres with decoder binding agent, wherein the microspheres of each subpopulation comprises an identifier binding ligand that will bind a decoder binding ligand for identification and elucidation of the target analyte of Chee et al in the method of claims 1-30 of U.S. Patent No. 6,355,431 B1, since Chee et al. state, "The present invention is directed to the formation of very high density arrays that can allow simultaneous analysis, i.e., parallel rather than serial processing,

on a number of samples (Column 4, lines 18-21)." An ordinary practitioner would have been motivated to combine and substitute the method further comprising contacting the microspheres with decoder binding agent, wherein the microspheres of each subpopulation comprises an identifier binding ligand that will bind a decoder binding ligand for identification and elucidation of the target analyte of Chee et al in the method of claims 1-30 of U.S. Patent No. 6,355,431 B1 in order to improve the process for determining the presence of at least one specific nucleotide sequence in a target nucleic acid and also in order to achieve the express advantages, as noted by Chee et al., of an invention which is directed to the formation of very high density arrays that can allow simultaneous analysis, i.e., parallel rather than serial processing, on a number of samples.

Response to Amendment

5. In response to amendment, new double-patenting rejection has been included.

Response to Arguments

6. Applicant's arguments with respect to all pending claims have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Arun Chakrabarti, Ph.D. whose telephone number is (703) 306-5818.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gary Benzion, can be reached on (703) 308-1119.Any inquiry of a general nature or relating to the status of this application should be directed to the Group analyst Chantae Dessau whose telephone number is (703) 605-1237. Papers related to this application may be submitted to Technology Center 1600 by facsimile transmission via the P.T.O. Fax Center located In Crystal Mall 1. The CM1 Fax Center numbers for Technology Center 1600 are either (703) 305-3014 or (703) 308-4242. Please note that the faxing of such papers must conform with the Notice to Comply published In the Official Gazette, 1096 OG 30 (November 15, 1989).

Arun Chakrabarti
Patent Examiner
Art Unit 1634

March 17, 2003

ARUN K. CHAKRABARTI
PATENT EXAMINER